

Dr. Peterson

Commencement Address, Colorado School of Mines

Friday, May 10, 2013

Thank you. I am honored to join with you on this special day in your lives. In my four years as the president of Georgia Tech, my favorite event is commencement. Last weekend I had the privilege of shaking hands in three ceremonies with a total of 2,700 Georgia Tech graduates as they crossed the stage in our new McCamish Pavilion.

Commencement is a celebration of personal accomplishments and the power of teamwork, as well as a visible symbol of your university fulfilling its role of equipping the next generation with what it and society need most.

Someone once said that commencement is our biggest technology transfer event – sending our best and brightest out into the world — and I believe that this is true here at Mines!

One of our commencement speakers last weekend was Kevin Riley, editor-in-chief of the *Atlanta Journal-Constitution*. He said that “nothing is more important to a culture, a family, a company, and even a university than the stories people tell about it.” Today, you are going out into the world prepared to design solutions to some of the world’s greatest challenges. You are also writing new chapters in your story.

That is what I want to talk to you about today, your story. As we go through life, each of us is writing a story. Some might call it an autobiography and to others it is a history, but that is not important. What is important is to think about what kind of story you will write, and to be purposeful in what you want to accomplish.

There will be things you can’t prepare for or control, things that may surprise you – events that you did not expect and opportunities that you had never hoped for. There

will be people who will come and go; some will be written in unexpectedly and some will be written out sooner than you might want.

And, just as people publish instant updates on Facebook and Twitter, you can expect that people will be constantly reading your story as it develops.

You see, people remember stories. In their book, *Made to Stick: Why Some Ideas Survive and Others Die*, Chip and Dan Heath talk about how stories help people remember places, events, and people. The Colorado School of Mines has a story and so does Georgia Tech. In fact there are many similarities in the two stories —

- Both Mines and Tech have very strong programs in engineering, science, technology and related fields, and emphasize innovation and environmental sustainability.
- Both are known for having a challenging curriculum and emphasizing an interdisciplinary approach to solving problems of importance to society.
- Both are cited for a very high return on investment, something to which the parents here are paying particularly close attention.
- The Colorado School of Mines was founded in 1874; Georgia Tech was founded in 1885.
- You attract some of the best and brightest, as do we.
- Both are steeped in tradition.
- You have an “M” carved in a mountain that lights up.
- We have a “T” that lights up on the Tech Tower.
- You have Marvin the Miner. We have Buzz.
- You have a band where members wear plaid shirts and hardhats — well, we don’t have that!
- And we both have a fight song and they are remarkably similar.

In fact, four and a half years ago, when it was announced that I was going to be the next President of Georgia Tech, President Scoggins and his wife, Karen, invited my wife, Val, and me out for what I thought was going to be a congratulatory or farewell dinner. Little did I know that he was going to tell me that my first act as president should be to get Georgia Tech to cease and desist from using YOUR fight song.

I thought that idea might not go over too well in Atlanta and I wasn't really sure I believed him, so I went to the source of all knowledge – Wikipedia and did a little research. As it turns out, *your song originated here at Mines in 1879, and the* earliest published version of the Georgia Tech fight song, *The Ramblin' Wreck* appeared in a program of the school's cheers and fight songs around 1910. So I guess President Scoggins was right, but that is another story!

Today, I want to focus on YOUR story and the unlimited potential ahead of you. You are off to a great start with the many successes that led to your admission to Mines, the academic success you have had, and now with your graduation and the awarding of your degree.

You are graduating at a time of great global challenges. We have more than seven billion people on the planet, and we are consuming natural resources at a rate that cannot be sustained. Clean water is in seriously short supply in many regions of the world, and we have challenges in energy, medicine, and cybersecurity, just to name a few.

I hope your story records that you have helped to address some of these problems – to help cure cancer, resolve issues around clean water, energy, sustainability, cybersecurity, and healthcare IT.

Thus far in my story, I have seen some amazing things. I can remember lying in a hammock in my neighbor's backyard with my father when I was about six years old looking up at the sky for Sputnik to fly over – a faint, twinkling light, moving across the sky. Sputnik caused a whole generation, including me, to refocus their education on engineering, mathematics, and science.

And I can remember 52 years ago this month, when President John F. Kennedy challenged our country to “within the decade, land a man on the moon and return him safely to earth.” I was in the football stadium at Rice University the next year when President Kennedy talked about the challenge, and the part that you do not often see is the next line “Why do we choose to go to the Moon – why does Rice play Texas – not because it is easy but because it is hard!”

What ensued was a collaborative effort between scientists and engineers, engaging government, industry, and education to bring that dream to reality. And on July 21, 1969, just eight years after he issued the initial challenge, many of us remember sitting or standing in front of our television sets with 500 million people worldwide and watching Neil Armstrong take that first step on the moon's surface, pronouncing “That's one small step for man, one giant leap for mankind.”

The accomplishment became symbolic of the power of American ingenuity. The saying became “If we can land a man on the moon, then we should be able to — dot, dot, dot, fill in the blank.” I believe that “can do” attitude is as true today as it was more than 50 years ago.

I am a self-confessed space geek and so are some of you. I'm OK with that. I understand that a few years ago you established NERDS here at Colorado School of Mines, a space exploration development team. Perhaps part of your story will be to help to make interplanetary space travel become a commonplace reality.

I am so jealous. In your lifetime, you will see and do some amazing things, things that will boggle the mind. I hope that they are part of your story, but I also hope that your story has a chapter on how you have helped your fellow man, how you have helped your community or the millions of underprivileged people, somewhere in the world.

At places like Georgia Tech and the Colorado School of Mines, we are very purposeful about creating an environment that fosters a strong sense of public service and social consciousness.

A great example is “Engineers Without Borders” which has active chapters at both Mines and Tech. This is an organization that fosters innovation and collaboration and includes students from all disciplines.

The students design and implement solutions for health and infrastructure needs in developing countries. Some of the current projects at Georgia Tech include providing a solar powered well and distribution system for a village in Cameroon, developing a water source for irrigation in a village in Uganda, and providing potable water for the people of the Navajo Nation.

Here at Mines, an Engineers Without Borders group recently spent their spring break in Nicaragua to design and build a pedestrian footbridge over the Rio Ochomogo, which frequently floods. It was the fourth trip over the last year, and while students are trained in the latest high-tech systems and technologies, they spent a great deal of time hand mixing and pouring concrete anchors, stringing cables, and laying decking and fencing.

As graduates of Mines, you have the potential to make a real difference in our world. Many of you may have gone through some lean times – and believe me, I remember those days — and you are looking forward to having “food with your meals,” but I hope

you realize that it is not how much money you make or what position or job you have that will make your story memorable. The real staying power of your story for generations to come is WHAT HAVE YOU DONE TO HELP MAKE THE WORLD A BETTER PLACE?

I want to share the story of a man I met about two years ago, Dr. William Foege. Dr. Foege was the 2012 recipient of Georgia Tech's Ivan Allen Prize for Social Courage. While Dr. Foege might not be well known in many circles, it is only because his story is still being written.

As a young doctor in Africa, Dr. Foege was challenged by the Centers for Disease Control and Prevention, or CDC, to help arrest smallpox transmission in 20 designated countries of West and Central Africa. In very difficult circumstances he forged partnerships with everyone from local village chiefs to top government officials. At the time, the standard protocol was mass immunizations, but there wasn't enough of the vaccine to go around.

Nonetheless, Dr. Foege implemented a strategy based on his experience as a young man fighting forest fires in Washington and Oregon where there were two maxims:

- separate the fuel from the flames and the fire stops, and
- the importance of teamwork.

Once the virus was detected, Dr. Foege's team set out to identify the nearest susceptible people and protect them before the virus could reach them, including tracking down visitors and relatives in nearby marketplaces to immunize them during the two-week virus incubation period.

The concept used then, and to this day, in combatting other communicable diseases, is referred to as "surveillance and containment." Because it is targeted, it requires

immunization of as little as 7 percent of the population, as opposed to the 100 percent previously required.

It was controversial, and there were those who doubted its effectiveness. But it worked and in the end, smallpox was eradicated in Africa, and then India. And then the world.

On the website, scienceheroes.com, Dr. Foege is listed as No. 1 on the list of “Top Ten Living Lifesaving Scientists” by Discovery. On the site there is a counter. At last count, more than 139 million lives have been saved by the eradication of smallpox.

It is the first disease to be eradicated in the history of the world. Dr. Foege went on throughout his career to head the CDC and the Carter Center in Atlanta and he has served as a consultant to the Gates Foundation, improving global health in numerous areas.

THAT is a story that we would all like to have written about us, and you all have this potential.

In doing research on Dr. Foege, I was struck by two things. First, he is uncomfortable taking credit for his actions; he believes that any great accomplishment is the result of teamwork.

Second, he believes in the impossible. In his current book, *“House on Fire: The Fight to Eradicate Smallpox,”* he states that the belief that it could be done seemed like the most important factor in the global eradication effort.

He wrote, “We all know the adage that some things have to be seen to be believed. In fact the opposite is often true: some things have to be believed to be seen.”

As you go through your life, I would urge you to think about the story you are writing. Is it a story that you can be proud of, one like that of Bill Foege, that others will want to tell, or one that will sit on the shelf, unread?

In your story, there will be ups and downs, but in the end, the conclusion will be up to you. Make it a story of which you can be proud.

In a few minutes each of you will cross the stage and receive either your parchment or the famous silver-plated diploma, a symbol of your accomplishments and all of the hard work you have completed, and a credential that will open doors for you – that will open the next chapter in the story of your life you are writing.

As you do so, do not forget about the acknowledgement section of your story. There have been and will be many who have helped you along the way. Do not forget to thank them and to recognize the guidance, advice, or assistance that they provided. That is the best way you can thank them and it will make your story part of theirs.

Finally, this is the end of one chapter in your story – the granting of your diploma, I hope you will also see it for the potential it represents, — the potential to write a really memorable story, one that helps to improve and change the world, one that those who love you and honor you with their presence here today will be proud to share.

All the best and God's speed on your journey.

Thank you.